

CLIMBING THE CO2

PERFORMANCE LADDER: STEP 5



MOST
INNOVATIVE
(FOOD) COMPANY
2015



WINNER
BAMRUBIS AMSTERDAM
Nieuw-West
2016



WINNER
SOCIAL ENTERPRISE
OF THE YEAR
2017



WINNER
TROUW
Onderneming 100
2018



WINNER
BEST OF THE
WORLD 5 CORP
2018/2019



PART OF CODE
VOOR SOCIALE
ONDERNEMINGEN
2019



NOMINEE
KONING WILLEM 1
PRIJS
2020



BEST
5% CORP
IN THE WORLD
2021



2022 | 2021 | 2019 | 2018

Certified



Corporation

CLIMBING THE CO2 PERFORMANCE LADDER: STEP 5

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INTRODUCTION

Looking at one's immediate carbon footprint is great, however, you are unlikely to understand the full scale of your emissions like this. There is a load more CO₂ embedded within the products we buy. Unlike the first steps of the CO₂ performance ladder, step 5 requires us to take a deeper dive into CO₂ emissions along the supply chain. This way, we as a company can understand the CO₂ our products emit and make plans to reduce it.



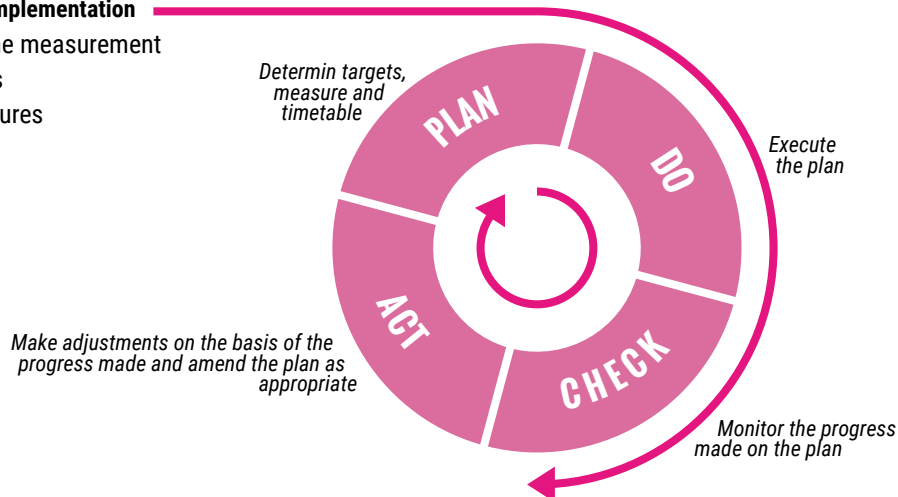
It sounds simple enough, but in fact it is quite a challenging task, as you can imagine, who is responsible for what emissions is a tricky question. For example, who takes the responsibility for emissions from farming practices? Is the farmer? The exporter? The retailer? The consumer? Well luckily, this isn't the blame game and well it's not a game at all.

We drastically need to reduce CO₂ emissions and the planet doesn't care who did it, but whether we can stop doing it. This is an opportunity for us to work together and find innovative ways to collectively reduce emissions within our supply chain. This is a daunting task for unhealthy supply chains that depend on exploitation and deceit.

Luckily, Moyee has a healthy relationship with our suppliers and deals with a smaller supply chain with fewer middle men. This makes it easy for us to get information from everyone in the supply chain and easy to enact change.

Start of Implementation

- Baseline measurement
- Targets
- Procedures



CURRENT SITUATION

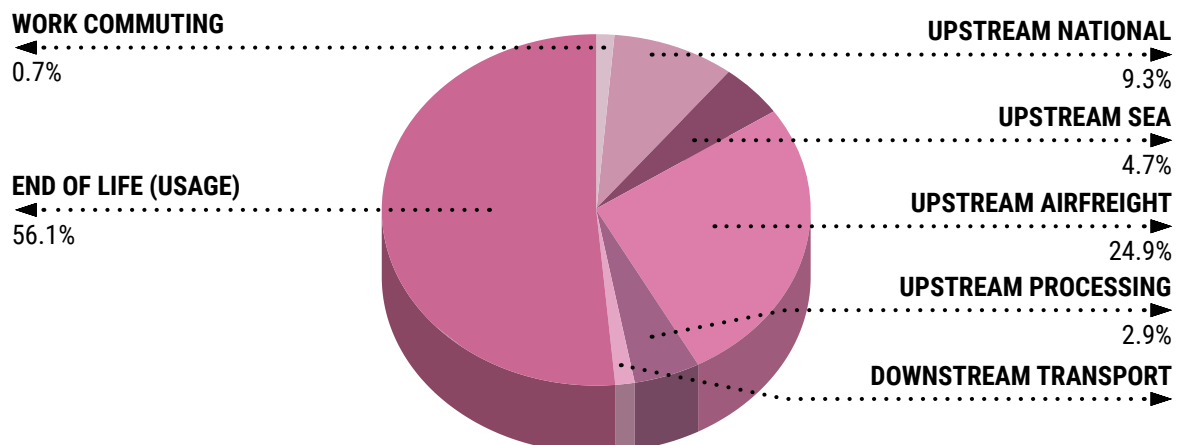
In 2022, Moyee sold 165,221kg of roasted coffee originating primarily from Ethiopia, Kenya, Uganda, and Congo. Smaller amounts also originate from Rwanda, Colombia, and Honduras. The coffee from Ethiopia, Colombia, and Honduras is roasted in the country of origin and sent by airfreight, while the rest of the origin is shipped by sea.

Total Emissions

The CO₂ emitted from every component of our supply chain amounts to approximately 391.4tCO₂eq per year. Shipping a product across the world for Europeans to enjoy requires a lot of energy, with current technology this means CO₂ emissions from fossil fuels. For Moyee this adds up to 154.18 tons of CO₂eq in 2022. This is the largest source of CO₂ in our supply chain before it reaches the consumer. However, interestingly emissions associated with the consumer preparing coffee is nearly double the transport emissions. This is interesting, however it is very difficult to determine accurately as we do not have the specific details of how every consumer prepares coffee. Rather we rely on average carbon intensity of electricity supply and standard preparation methods.

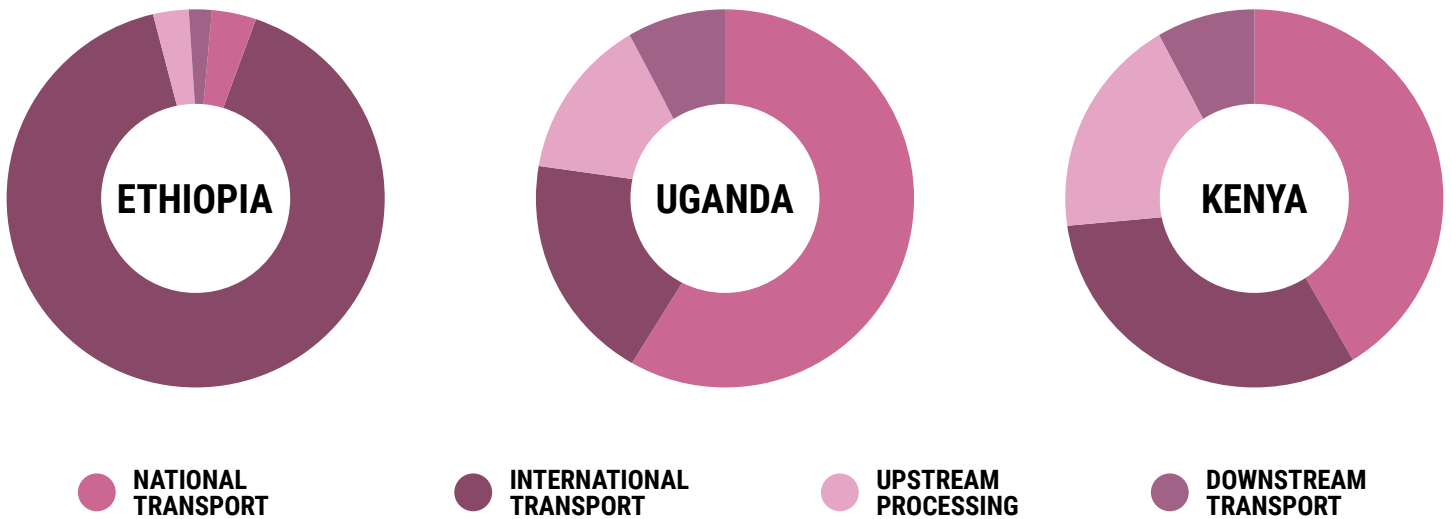
	EMISSION CATEGORY	TOTAL KG CO ₂
BUSINESS	Upstream national transport	35549.54268
	Upstream sea transport	17934.55841
	Upstream airfreight	95111.72873
	Upstream processing	11041.19549
	Downstream transport	5585.519896
	End of life (usage)	214138.175
OFFICE	Work commuting	2555.616
	Business travel	438.5463158
	Heating	6186.2
	Electricity	2864.5
	TOTAL	391405.5826

MOYEE SCOPE 3 CO₂ EMISSIONS BY ACTIVITY

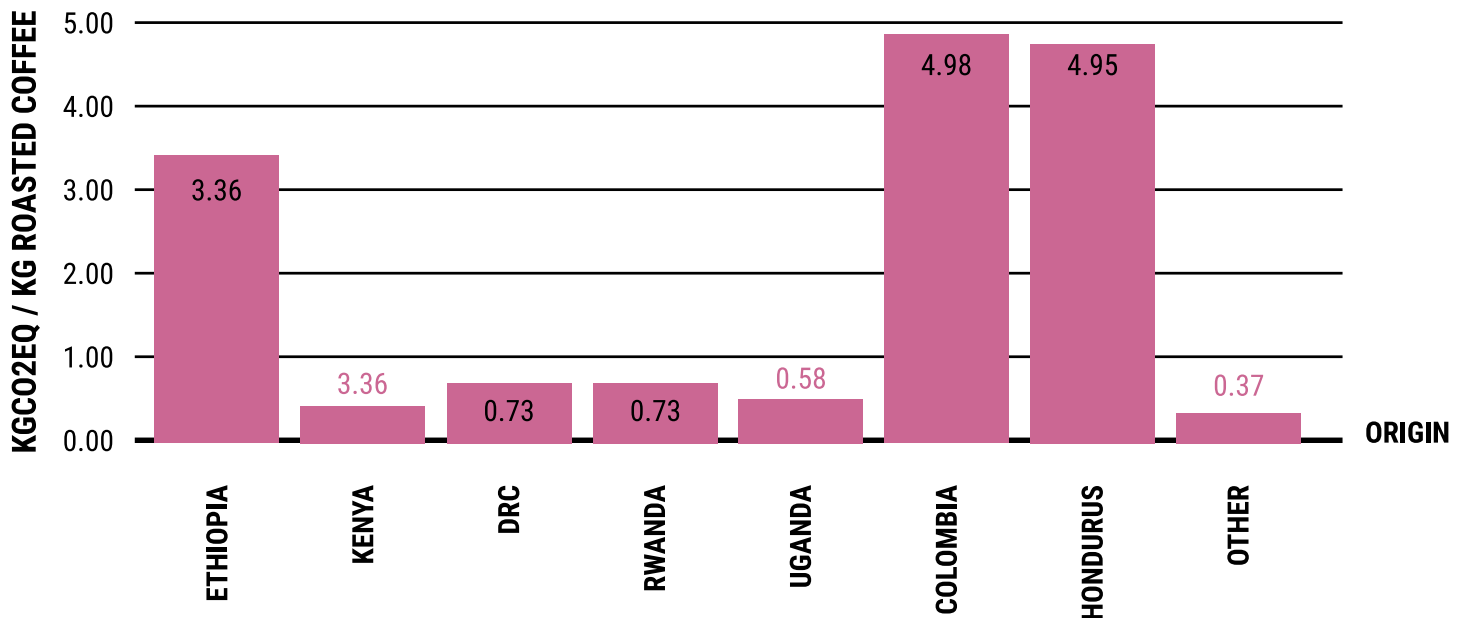


EMISSIONS PER ORIGIN

After analysing the CO2 emissions associated per kilo of roasted coffee from different origins, it is clear that there are clear differences in these origins. Ethiopia, Colombia, and Honduras stand out as having significantly higher emissions than other countries. This is due to the fact that they rely currently on air freight to reach the Netherlands. This is partly due to the lower volumes being exported at once and supply chain issues with shipping by sea.



MOYEE SCOPE 3 CO2 EMISSIONS BY ACTIVITY

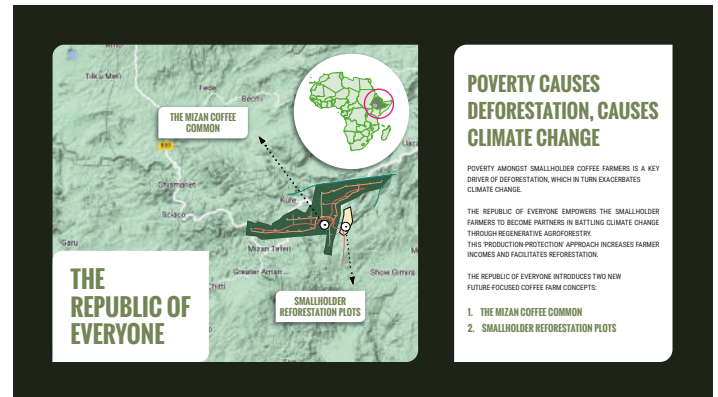


FROM REDUCING CARBON FOOTPRINT TO POSITIVE HANDPRINT

CARBON SEQUESTRATION

Moyee is focused on reducing emissions as much as possible, but we also focus on increasing and maintaining carbon sinks. This includes protecting forests where coffee is grown, planting more trees, and employing agroforestry practices to sequester carbon dioxide.

For this we have launched mission earth and created **The Republic of Everyone**



CONCEPT 2

SMALLHOLDER REFORESTATION PLOTS TURNING FARMERS INTO CLIMATE WARRIORS

COFFEE IS BY NATURE A FOREST-SHADED PLANT, BUT WHEN SO LITTLE MONEY IS GOING TO FARMERS THEY CHOOSE INSTEAD TO CUT DOWN FORESTS FOR OTHER CROPS AND LIVESTOCK. THIS IS WHAT WE MEAN WHEN WE SAY POVERTY LEADS TO DEFORESTATION LEADS TO CLIMATE CHANGE

IN JUST A FEW DECADES ETHIOPIA HAS LOST 3.5 MILLION HECTARES (35,000 KM²) OF FOREST. THAT'S ENOUGH FORESTS TO ABSORB THE CARBON EMISSIONS OF AMSTERDAM 10X OVER. EVERY YEAR ANOTHER 150,000 HA (1500 KM²) OF FOREST IS LOST. WITH 90% OF ETHIOPIAN FARMERS LIVING ON LESS THAN 1 HA (0.1 KM²) OF LAND, IT IS ABSOLUTELY VITAL WE FIND A WAY TO TURN SMALL PLOTS OF LAND INTO PROFITABLE PLOTS THAT PROTECTS FOREST.

YOUR INVESTMENT WILL HELP TRANSFORM 20 X 1HA (0.1 KM²) OF DEFORESTED LAND INTO PROFITABLE AGROFORESTRY PLOTS. WHEN EXECUTED PROPERLY IT CAN SEQUESTER CO₂, STOP DEFORESTATION, HELP TO BATTLE CLIMATE CHANGE WHILE PRODUCING BETTER CROPS WITH HIGHER INCOME AT LESSER COSTS.

WE CAN ACHIEVE ALL OF THIS WITH RELATIVELY SMALL INVESTMENTS. YOUR SUPPORT CAN HELP US PROVE THIS MODEL THEN PAVE THE WAY FOR MASSIVE REFORESTATION AND INCREASE OF INCOME FOR THOUSANDS OF FARMERS.



TWO YEARS OF DEFORESTATION CAUSED BY POVERTY.
TOGETHER WE WILL TURN THIS AROUND!



ULTIMATE GOAL

CAFFEINATED REFORESTATION

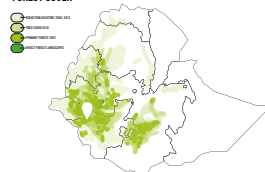
OUR ULTIMATE GOAL IS TO SCALE UP OUR PROFITABLE AGRO-FORESTRY PROGRAM AND KICKSTART AN AMBITIOUS REFORESTATION PROJECT.

THE REPUBLIC OF EVERYONE WILL COLLABORATE WITH THE FAIRCHAIN FOUNDATION AND THE BENCH MAJI COFFEE FARMERS' COOPERATIVE IN ETHIOPIA WITH THE AIM TO INSPIRE BENCH MAJI'S 30,000-STRONG FARMERS TO ADOPT OUR AGROFORESTRY BLUEPRINT AND SET THE FIRST STEPS TO REFOREST SOME 3.9 MILLION HA (3,900 KM²) OF LOST ETHIOPIAN FOREST.

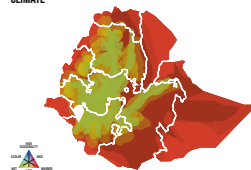
IN DOING SO, WE CAN ELEVATE 1 MILLION FARMERS OUT OF POVERTY WHILE PROVING TO THE WORLD THAT PROFITABILITY AND ECOLOGICAL STEWARDSHIP CAN GO HAND IN HAND.

AMBITIOUS? MAYBE.
DOABLE? WITH YOUR HELP,
A RESOUNDING YES!

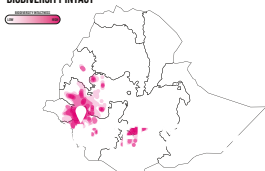
FOREST COVER



CLIMATE



BIODIVERSITY INTACT



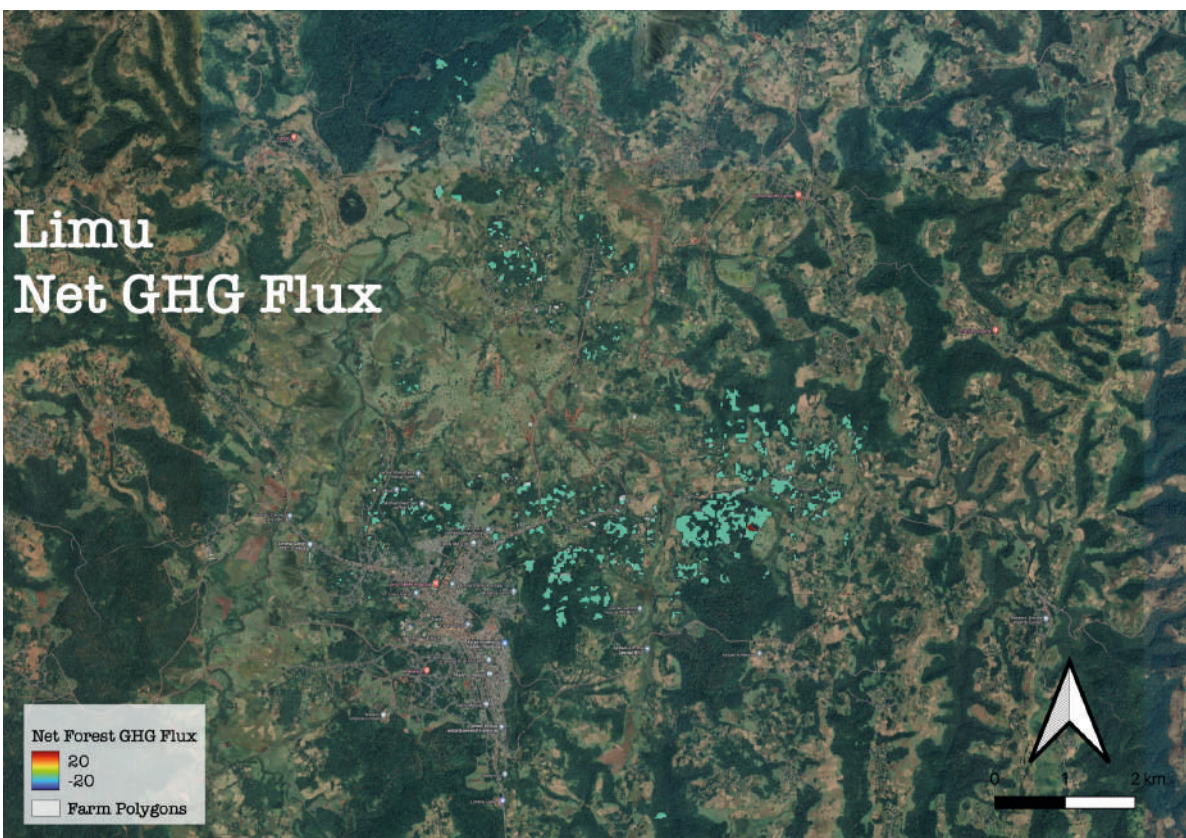
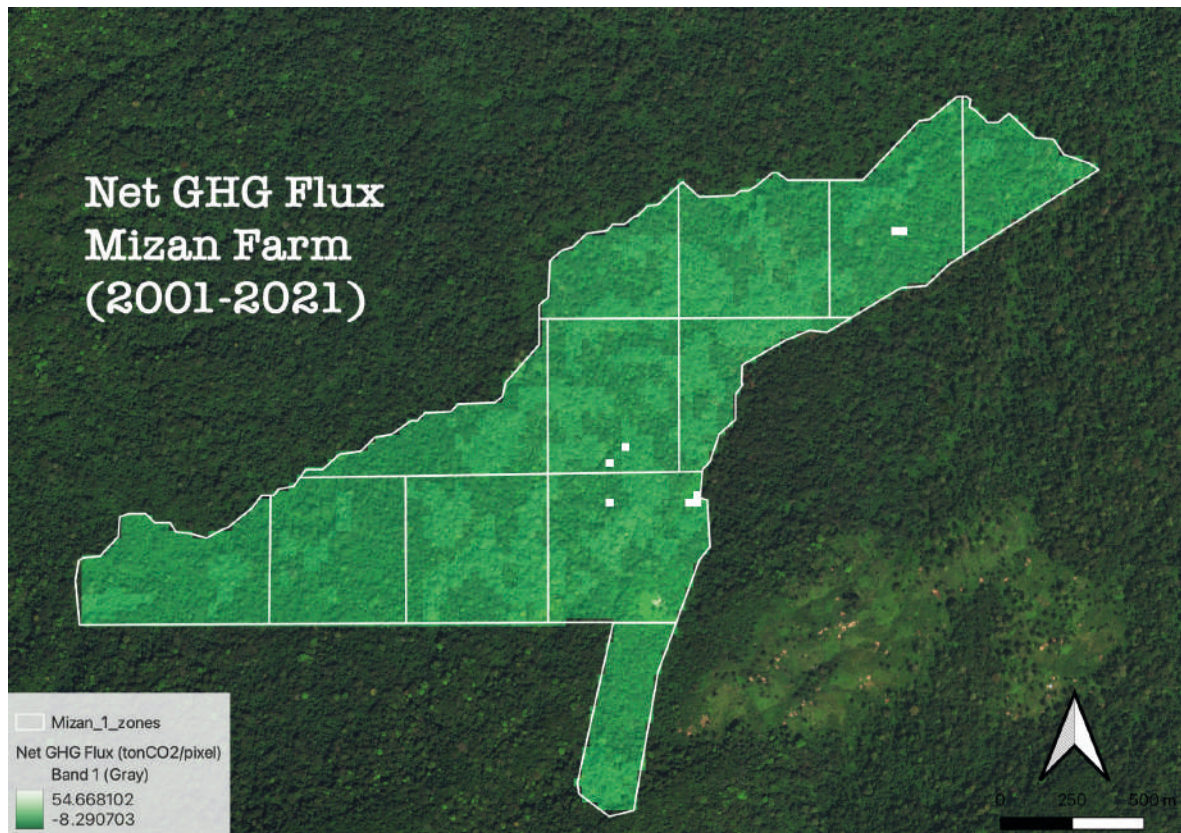
1) **FOREST COVER:** EVERY YEAR IN ETHIOPIA A FOREST AREA 7X THE SIZE OF AMSTERDAM IS LOST TO DEFORESTATION. WITH MIZAN, WE WANT TO PROVE THAT IT MAKES BOTH ECONOMIC AND ENVIRONMENTAL SENSE TO PROTECT SUSTAINABLE FARMING PRACTICES THROUGHOUT THE COUNTRY'S REMAINING COFFEE FORESTS.

2) **CLIMATE:** THE CHOICE OF LOCATION FOR OUR MIZAN FARM IS NO ACCIDENT. THIS IS A REGION THAT WILL BE AMONG THE FIRST TO SIGNIFICANTLY SUFFER FROM FURTHER TEMPERATURE RISES. AN IMPORTANT PART OF OUR MISSION AT MIZAN IS TO EXPLORE THE VARIOUS WAYS FARMERS CAN ADAPT TO - AND PERHAPS EVEN PROFIT FROM - CLIMATE CHANGE THROUGH SMARTER WATER USAGE, INTERCROPPING AND REFORESTATION.

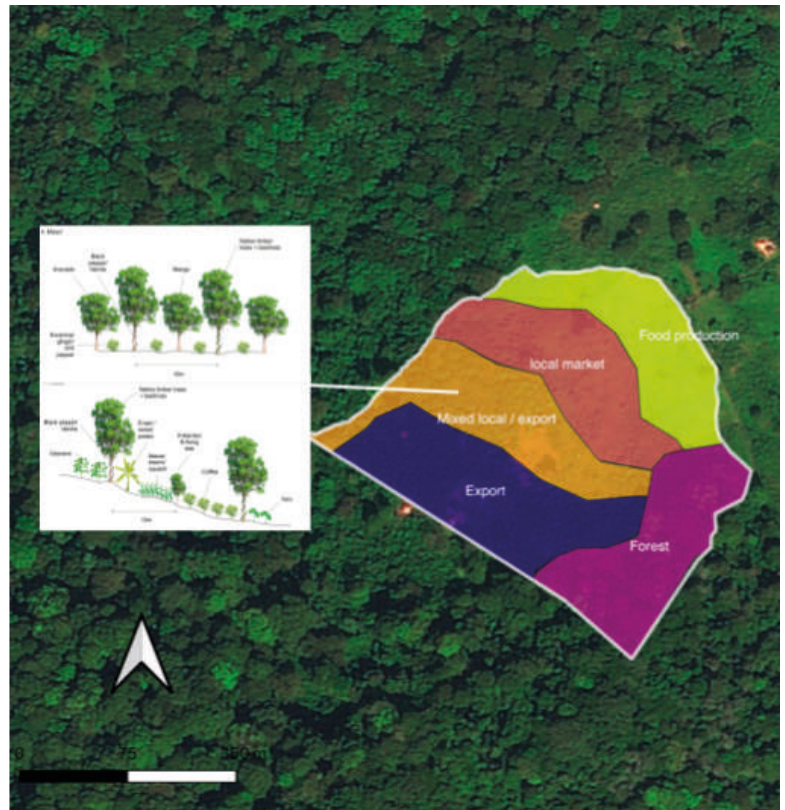
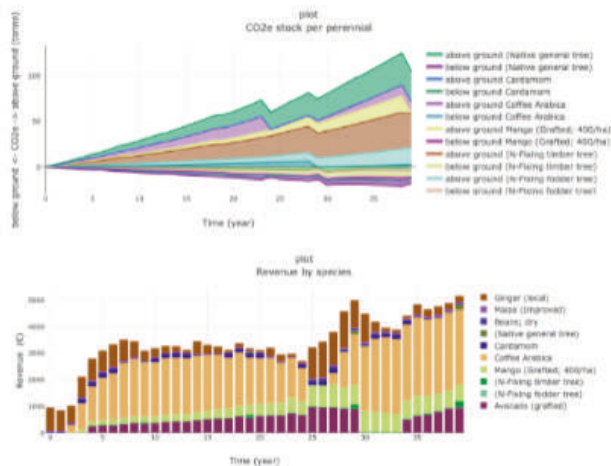
3) **BIODIVERSITY INTACTNESS:** WITHOUT A NEW ECONOMIC PARADIGM THERE IS A VERY REAL RISK THAT ETHIOPIA WILL LOSE MUCH OF ITS CURRENT FOREST-SHIELDED COFFEE PRODUCTION TO BRAZILIAN-STYLE INDUSTRIAL MONOCROP PRODUCTION. IN EMBRACING A TRUE COST METHODOLOGY AT MIZAN, WE ARE EXPLORING HOW TO GROW COFFEE AT SCALE WHILE KEEPING BIODIVERSITY INTACT. IT IS VITAL FOR OUR FARMERS AND FOR THE PLANET THAT WE SUCCEED.

BUT WHAT ABOUT THE NUMBERS

Currently, from our 240ha Mizan farm in Ethiopia, 706.86tCO₂eq is sequestered every year. Similarly, from our smallholders in Limu, over 537tCO₂eq is sequestered per year. This alone amounts to 1243.86tCO₂eq every year, which is approximately 3 times as much carbon dioxide as our entire supply chain emits every year.



Our plan of action starts with eliminating air freight from the Ethiopian supply chain in year one. Following this in year two, we hope to eliminate all air freight from microlots. At the same time we are also working on several initiatives in the participation section of this report. One project that we are working on now is quantifying the CO2 sequestration from different agroforestry systems that we are implementing now to reforest an area of land. The plots of land will serve as experimental plots for creating model agroforestry systems for different management scenarios for the 12.000 smallholder farmers surrounding the farm.



These scenarios are being analysed by Rabobank Acorn Carbon Credit Market partner FarmTree. Please study their report.

Cost-Benefit Analysis for Coffee Agroforestry Systems in Ethiopia

Draft feasibility report



FarmTree® BV, May, 2023

Submitted to: FairChain





EUROPEAN
COMMISSION

Brussels, 17.11.2021
SWD(2021) 327 final

COMMISSION STAFF WORKING DOCUMENT

EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT REPORT

minimising the risk of deforestation and forest degradation associated with products placed on the EU market

Accompanying the document

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the making available on the Union market as well as export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010

BUT ITS TOO LITTLE TOO LATE

TO LITTLE TO LATE

deforestation legislation

Pros	Cons
Forces companies to look into origins of products	Easy to falsify
Targeted approach	Pushes out some producers from EU market into less regulated markets
Support available	Deforested land is neglected rather than reforested



EMS certification schemes

Pros	Cons
Focus on reduction of emissions	Expensive - pushes out smaller players
Organized and simple approach	Low bar - allows for companies to choose select scope 3 mitigation strategies that they have the most control over
Provides benefits to companies such as a priority in tender applications	Easy to hire consultant to make meaningless and vague mitigation plans

carbon offset projects (ACORN)

Pros	Cons
Is focused on smallholder agroforestry	Price of carbon = 20-30 euro per ton*
Focuses on carbon removal - makes it harder to falsify	Focus on carbon removal - does not pay for protection
Good support from ACORN team in planning and monitoring	For coffee the returns are too low to incentivize action



We don't believe in offsetting. Companies should take responsibility within their own supply chain via insetting

Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows

Investigation into Verra carbon standard finds most are 'phantom credits' and may worsen global heating

To turn our carbon surplus into a positive handprint that can support our customers in reaching their insetting goals we work with leading partners and FairChain blockchain technology to create secondary market carbon credit tokens.



52impact



THANK YOU!

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